REMARKS

The following response is being filed together with a Request for Continued Examination.

35 U.S.C. §102

The Examiner rejected claims 1, 6-8, 11, 13 and 14 under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,951,694 of Choquier et al. ("Choquier"). Applicants request that this rejection be withdrawn and all claims be allowed because Choquier does not disclose each element of any of the claimed inventions. Particularly, Applicants request that all claims be allowed for at least the reason that Choquier does not disclose the claimed separate file metadata/file data storage services (claims 1 and 8) or the claimed file storage gateway service (claims 1 and 14).

Applicants have further amended the claims to better clarify the characteristics of the inventions specifically related to file systems. Choquier, which does not describe a file storage system including the relevant components, does not anticipate any of the claims. Claim 1 recites a file storage system with separate file metadata, file storage gateway and file data storage services. Claim 8 recites a file storage system with separate file data storage service and file metadata service elements.

In the Office action, the Examiner quotes Applicants' argument as being, in part, that "Choquier does not disclose or suggest a system having a metadata service that is separate and independent from the storage service; the arbiters do not provide a meta data service or access to meta data." In both claims 1 and 8, as previously amended and as shown above, Applicants do specifically recite that at least one instance of the file data storage service and the file metadata service "are separate from each other." Thus, Applicants respectfully assert that the Examiner's claim that this limitation is not in the claims is incorrect. Notwithstanding, Applicants further recite in the clauses added to claims 1 and 14 that the "the metadata server and file data storage server are separate and independent from each other."

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Choquier does not teach a file storage system with separate file metadata and file data storage server elements, as recited in claims 1 and 8, for all of the reasons set forth in Applicants' Amendment and Response dated May 30, 2006, which is incorporated herein by reference. Therefore, claims 1 and 8 and all claims depending from those claims (i.e., claims 6, 7 and claims 11, 13 and 14, respectively) are allowable over Choquier.

Additionally, Choquier does not disclose the claimed file storage gateway service or servers recited in claims 1 and 14. The Examiner rejected all claims including a gateway service. Applicants further amended this limitation to better describe the operation of the recited gateway service, and assert that the amended claims are further allowable over Choquier for this additional reason.

The Examiner indicates that Choquier teaches a system where the front-end gateway servers, which are really just request forwarders, pass requests on to application servers which have some state and hence are in effect storage servers. The claimed gateways are capable of external file access requests. The gateways determine the appropriate internal requests to the appropriate internal file metadata and file data servers. For example, if an external client requests that a block of a file be read, the gateway server handling the request can first locate the file's metadata. The gateway server may have this already cached, and will thus find the answer in its own cache, but, if not, it has the ability to fetch it from the appropriate metadata server. Having done so, it can then determine, using the file metadata, in which file data storage server or servers the requested block resides. If, for example, a file is striped across 10 file data storage servers with a stripe block size of 8 KB, a request for 16 KB at offset 64 KB will need to read 8 KB from each of the ninth and tenth file data storage servers storing data for the file.

In Choquier, on the other hand, a gateway is no more than a stateful proxy, and stateful only in terms of being able to maintain communication state across a sequence of transactions, as in Network Address Translation (NAT) functionality in a firewall
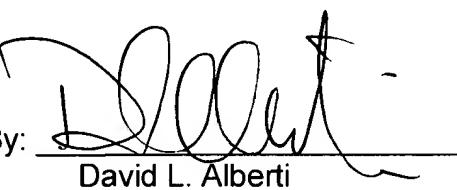
device. Choquier's gateway is merely that, and is not an integral part of a file storage system. The gateways in the present application provide the front-end part of a distributed file storage system and are capable of factoring requests into sub-requests destined to the appropriate metadata and file data storage servers. In contrast, the gateways in Choquier merely pass on a given request to a server of the set of servers handing that class of request, without concern for its content. For at least these additional and independent reasons, claims 1, 6, 7 and 14 are further allowable over Choquier.

CONCLUSIONS

For at least these reasons, Applicants respectfully assert that all pending claims 1, 6, 7, 8, 11, 13 and 14 are in condition for allowance. The Examiner's early reconsideration is respectfully requested. If the Examiner has any questions, the Examiner is invited to contact Applicant's attorney at the following address or telephone number:

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Respectfully submitted,

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